GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: July 30, 2005, 15:25:34 ; Search time 257.941 Seconds
(without alignments)
4108.047 Million cell updates/sec

Title: US-10-617-978-14_COPY_62_240
Perfect score: 179
Sequence: 1 cggctgacgtcccgggaaac.....atgagaacgtgaaggtctga 179

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 4390206 seqs, 2959870667 residues

Total number of hits satisfying chosen parameters: 8780412

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_16Dec04:*
1: geneseqn1980s:*
2: geneseqn1990s:*
3: geneseqn2000s:*
4: geneseqn2001as:*
5: geneseqn2001bs:*
6: geneseqn2002as:*
7: geneseqn2002bs:*
8: geneseqn2003as:*
9: geneseqn2003bs:*
10: geneseqn2003cs:*
11: geneseqn2003ds:*
12: geneseqn2004as:*
13: geneseqn2004bs:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Result No.	Score	% Query Match	Length	DB	ID	Description
	1	42.2	23.6	270	5	AAA89399	Aaa89399 Scorpion
	2	40.8	22.8	270	5	AAA89400	Aaa89400 Scorpion
	3	40.8	22.8	270	5	AAA89398	Aaa89398 Scorpion
	4	38	21.2	270	5	AAA89397	Aaa89397 Scorpion
c	5	32.6	18.2	336	2	AAT90799	Aat90799 Rat perse
c	6	32.6	18.2	336	2	AAX60455	Aax60455 Partial s
c	7	32.6	18.2	336	2	AAX60459	Aax60459 WO9914235
c	8	32.6	18.2	391	2	AAX60460	Aax60460 WO9914235
	9	32.6	18.2	515	8	ABZ53533	Abz53533 Aspergill
c	10	32	17.9	780	4	ABA89006	Aba89006 Escherich
	11	32	17.9	2489	6	ABS78877	Abs78877 E. coli C
	12	32	17.9	2489	10	ADH80444	Adh80444 Escherich
	13	32	17.9	2498	4	ABA89004	Aba89004 Escherich
c	14	32	17.9	2811	4	ABL25174	Abl25174 Drosophil
c	15	31	17.3	4590	5	AAH24065	Aah24065 Yeast AOD
	16	30.6	17.1	582	6	ABN63438	Abn63438 Human can
	17	30.4	17.0	13563	4	ABL06306	Abl06306 Drosophil
	18	30.4	17.0	13629	4	ABL06290	Abl06290 Drosophil
	19	30.2	16.9	473	3	AAC98441	Aac98441 Human col
	20	30.2	16.9	1037	4	AAH34174	Aah34174 Human col
	21	30.2	16.9	3144	13	ADR08046	Adr08046 Full leng
	22	30.2	16.9	3378	6	AAK99410	Aak99410 DNA of AP
	23	30.2	16.9	3379	10	ADB99514	Adb99514 Human MCM
	24	30.2	16.9	3379	10	ADB31296	Adb31296 Testoster
	25	30.2	16.9	3379	12	ADO19247	Ado19247 Human PRO
	26	30.2	16.9	3379	13	ADP54323	Adp54323 Human PRO
	27	30.2	16.9	3379	13	ADP23357	Adp23357 PRO polyp
	28	30.2	16.9	3402	13	ACN37984	Acn37984 Tumour-as
	29	30.2	16.9	3406	6	ABL66479	Abl66479 Lung canc
	30	30.2	16.9	3406	6	ABK64397	Abk64397 Human ben
	31	30.2	16.9	3406	6	ABN95130	Abn95130 Gene #162
	32	30.2	16.9	3445	9	ACH03947	Ach03947 Human cDN
	33	30.2	16.9	3445	10	ADJ56503	Adj56503 Human cDN
	34	30.2	16.9	3445	12	ADL12594	Adl12594 Human ste
	35	30.2	16.9	3458	6	AAS95018	Aas95018 Human DNA
	36	30.2	16.9	3466	8	ACC51032	Acc51032 Human bla
	37	30.2	16.9	3466	8	ABX76294	Abx76294 Lung canc
c	38	30.2	16.9	38643	9	ADA03011	Ada03011 Mouse Ncf
c	39	30.2	16.9	38643	10	ADB72749	Adb72749 Mouse Ncf
c	40	30.2	16.9	38643	10	ADC85491	Adc85491 Mouse Ncf
c	41	30.2	16.9	38643	12	ADM74606	Adm74606 Murine ca
c	42	29.8	16.6	726	6	ABK39306	Abk39306 DNA encod
c	43	29.8	16.6	726	8	ACA11635	Aca11635 Human lun
c	44	29.8	16.6	726	8	ACA02821	Aca02821 Lung canc
c	45	29.8	16.6	726	10	ADH46863	Adh46863 Human lun

ALIGNMENTS

RESULT 1
AAA89399
ID AAA89399 standard; cDNA; 270 BP.
XX
AC AAA89399;
XX
DT 11-SEP-2003 (revised)
DT 23-APR-2001 (first entry)
XX
DE Scorpion sodium channel agonist cDNA clone ibj1c.pk008.f14.
XX
KW Scorpion; venom; toxin; sodium channel agonist; anticonvulsant;
KW nootropic; cerebroprotective; insecticide; ss.
XX
OS Hottentotta judaica.
XX
FH Key Location/Qualifiers
FT sig_peptide 1. .63
FT /*tag= a
FT mat_peptide 64. .267
FT /*tag= a
XX
PN WO200078957-A2.
XX
PD 28-DEC-2000.
XX
PF 21-JUN-2000; 2000WO-US017048.
XX
PR 22-JUN-1999; 99US-0140410P.
XX
PA (DUPO) DU PONT DE NEMOURS & CO E I.
XX
PI Herrmann R, Lee J, Wong JF;
XX
DR WPI; 2001-050111/06.
DR P-PSDB; AAB20077.
XX
PT New isolated polynucleotide encoding a scorpion toxin for treating
PT epilepsy, degenerative disorders such as Huntington's disease, and
PT neuronal death following stroke, and for creating plants that are insect-
PT tolerant.
XX
PS Claim 1(a); Page 57; 60pp; English.

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XX
CC   The present sequence is that of a portion of the cDNA insert in clone
CC   ibj1c.pk008.f14 that encodes a protein showing 29.6% identity to an
CC   insecticidal toxin of Orthochirus scrobiculosus. The clone was isolated
CC   from a scorpion (Buthotus judaicus) telson cDNA library. The invention
CC   provides isolated nucleic acid sequences (see AAA89386-400) encoding
CC   scorpion toxins (see AAB20064-78) that are sodium channel modifiers. The
CC   invention also relates to the construction of a chimeric gene encoding
CC   all or part of the sodium channel modifier, in sense or antisense
CC   orientation, where expression of the chimeric gene results in production
CC   of altered levels of the sodium channel modifier in a transformed host
CC   cell. Sodium channel modifiers can be used to treat neurological problems
CC   involving abnormal functioning of excitory amino acid synapses, e.g.
CC   epilepsy, Huntington's disease and neuronal death following stroke.
CC   Genetically engineered recombinant baculoviruses which express protein
CC   toxins capable of incapacitating an insect host can be used as biological
CC   insecticides. The nucleic acids can be used to create transgenic plants
CC   in which sodium channel agonists of the invention are expressed for
CC   improved insect tolerance. (Updated on 11-SEP-2003 to standardise OS
CC   field)
XX
SQ   Sequence 270 BP; 80 A; 34 C; 60 G; 96 T; 0 U; 0 Other;

  Query Match             23.6%;  Score 42.2;  DB 5;  Length 270;
  Best Local Similarity   61.3%;  Pred. No. 0.00012;
  Matches   68;  Conservative    0;  Mismatches   43;  Indels    0;  Gaps    0;

Qy          67 GAGATAATCCGGACTGCATTAAGATCTGTCAGAAACACGGTGTGGATTACGGGTATTGCT 126
               | ||| ||    | ||     | || ||| |   ||| || ||| |||| |||||||| |
Db         128 GTGATCATGATTATTGTGCGGACATTTGTAAAGTACATGGAGTGAATTATGGGTATTGTT 187

Qy         127 ACGCCTTCCAATGCTGGTGTGAATTTCTGAAGGATGAGAACGTGAAGGTCT 177
                 | |  |   || |||||||||| | |||| || ||  || | ||  | |
Db         188 GGGTCACCTCGTGTTGGTGTGAATATTTGAAAGAAGAAGACATCAATATTT 238


RESULT 2
AAA89400
ID   AAA89400 standard; cDNA; 270 BP.
XX
AC   AAA89400;
XX
DT   11-SEP-2003  (revised)
DT   23-APR-2001  (first entry)
XX
DE   Scorpion sodium channel agonist cDNA clone ibj1c.pk008.119.
XX
KW   Scorpion; venom; toxin; sodium channel agonist; anticonvulsant;
KW   nootropic; cerebroprotective; insecticide; ss.
XX
OS   Hottentotta judaica.
XX
FH   Key             Location/Qualifiers
FT   sig_peptide     1. .63
FT                   /*tag=  a
FT   mat_peptide     64. .267
FT                   /*tag=  a
XX
PN   WO200078957-A2.
XX
PD   28-DEC-2000.
XX
PF   21-JUN-2000; 2000WO-US017048.
XX
PR   22-JUN-1999;   99US-0140410P.
XX
PA   (DUPO ) DU PONT DE NEMOURS & CO E I.
XX
PI   Herrmann R,  Lee J,  Wong JF;
XX
DR   WPI; 2001-050111/06.
DR   P-PSDB; AAB20078.
XX
PT   New isolated polynucleotide encoding a scorpion toxin for treating
PT   epilepsy, degenerative disorders such as Huntington's disease, and
PT   neuronal death following stroke, and for creating plants that are insect-
PT   tolerant.
XX
PS   Claim 1(a); Page 58; 60pp; English.
XX
CC   The present sequence is that of a portion of the cDNA insert in clone
CC   ibj1c.pk008.119 that encodes a protein showing 29.6% identity to an
CC   insecticidal toxin of Orthochirus scrobiculosus. The clone was isolated
CC   from a scorpion (Buthotus judaicus) telson cDNA library. The invention
CC   provides isolated nucleic acid sequences (see AAA89386-400) encoding
CC   scorpion toxins (see AAB20064-78) that are sodium channel modifiers. The
CC   invention also relates to the construction of a chimeric gene encoding
CC   all or part of the sodium channel modifier, in sense or antisense
CC   orientation, where expression of the chimeric gene results in production
CC   of altered levels of the sodium channel modifier in a transformed host
CC   cell. Sodium channel modifiers can be used to treat neurological problems
CC   involving abnormal functioning of excitory amino acid synapses, e.g.
CC   epilepsy, Huntington's disease and neuronal death following stroke.
CC   Genetically engineered recombinant baculoviruses which express protein
CC   toxins capable of incapacitating an insect host can be used as biological
CC   insecticides. The nucleic acids can be used to create transgenic plants
CC   in which sodium channel agonists of the invention are expressed for
CC   improved insect tolerance. (Updated on 11-SEP-2003 to standardise OS
CC   field)
XX
SQ   Sequence 270 BP; 82 A; 33 C; 58 G; 97 T; 0 U; 0 Other;

  Query Match             22.8%;  Score 40.8;  DB 5;  Length 270;
  Best Local Similarity   61.1%;  Pred. No. 0.00038;
  Matches   66;  Conservative    0;  Mismatches   42;  Indels    0;  Gaps    0;

Qy          70 ATAATCCGGACTGCATTAAGATCTGTCAGAAACACGGTGTGGATTACGGGTATTGCTACG 129
               || ||    | ||     | || ||| |   ||| || ||| |||| |||||||| |  |
Db         131 ATCATGATTATTGTGCGGACATTTGTAAAGTACATGGAGTGAATTATGGGTATTGTTGGG 190

Qy         130 CCTTCCAATGCTGGTGTGAATTTCTGAAGGATGAGAACGTGAAGGTCT 177
                 |  |   || |||||||||| | |||| || ||  || | ||  | |
Db         191 TCACCTCGTGTTGGTGTGAATATTTGAAAGAAGAAGACATCAATATTT 238


RESULT 3
AAA89398
ID   AAA89398 standard; cDNA; 270 BP.
XX
AC   AAA89398;
XX
DT   11-SEP-2003  (revised)
DT   23-APR-2001  (first entry)
XX
DE   Scorpion sodium channel agonist cDNA clone ibj1c.pk006.p4.
XX
KW   Scorpion; venom; toxin; sodium channel agonist; anticonvulsant;
KW   nootropic; cerebroprotective; insecticide; ss.
XX
OS   Hottentotta judaica.
XX
FH   Key             Location/Qualifiers
FT   sig_peptide     1. .63
FT                   /*tag=  a
FT   mat_peptide     64. .267
FT                   /*tag=  a
XX
PN   WO200078957-A2.
XX
PD   28-DEC-2000.
XX
PF   21-JUN-2000; 2000WO-US017048.
XX
PR   22-JUN-1999;   99US-0140410P.
XX
PA   (DUPO ) DU PONT DE NEMOURS & CO E I.
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